

WCKX - PROPOSED
Channel = 292
Max ERP = 6 kW
RCAMSL = 385.4 M
N. Lat = 395229
W. Lng = 831819

Protected
60 dBu

WWJM - BLH-930601KD
Channel = 292
Max ERP = 6 kW
RCAMSL = 381 M
N. Lat = 394637
W. Lng = 820954

Interfering
40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
80.0	0.406	112.3	15.5	279.3	6.000	71.5	83.5	39.5
81.0	0.396	112.8	15.4	279.1	6.000	71.5	83.4	39.5
82.0	0.387	113.3	15.3	279.0	6.000	71.4	83.4	39.5
83.0	0.378	113.7	15.3	278.8	6.000	71.4	83.4	39.5
84.0	0.369	113.9	15.2	278.6	6.000	71.4	83.4	39.5
85.0	0.360	114.2	15.1	278.4	6.000	71.4	83.5	39.5
86.0	0.351	114.6	15.0	278.2	6.000	71.4	83.5	39.5
87.0	0.343	115.0	15.0	278.0	6.000	71.4	83.5	39.5
88.0	0.334	115.5	14.9	277.8	6.000	71.5	83.5	39.5
89.0	0.326	116.0	14.8	277.6	6.000	71.6	83.5	39.5
90.0	0.317	116.5	14.8	277.5	6.000	71.6	83.6	39.5
91.0	0.317	116.9	14.8	277.3	6.000	71.7	83.5	39.5
92.0	0.317	117.4	14.8	277.1	6.000	71.8	83.5	39.5
93.0	0.317	117.8	14.8	276.9	6.000	72.0	83.4	39.5
94.0	0.317	118.4	14.9	276.8	6.000	72.0	83.4	39.5
95.0	0.317	118.8	14.9	276.6	6.000	72.3	83.3	39.6
96.0	0.317	119.4	14.9	276.4	6.000	72.6	83.3	39.6
97.0	0.317	120.0	15.0	276.2	6.000	73.0	83.3	39.6
98.0	0.317	120.5	15.0	276.0	6.000	73.4	83.2	39.6
99.0	0.317	121.1	15.0	275.9	6.000	73.6	83.2	39.6
100.0	0.317	121.7	15.1	275.7	6.000	74.0	83.2	39.7
101.0	0.317	122.4	15.1	275.5	6.000	74.4	83.2	39.7
102.0	0.317	123.3	15.2	275.3	6.000	74.8	83.1	39.7
103.0	0.317	124.3	15.3	275.1	6.000	75.2	83.1	39.8
104.0	0.317	125.2	15.3	274.9	6.000	75.6	83.1	39.8
105.0	0.317	126.1	15.4	274.7	6.000	76.0	83.1	39.8
106.0	0.317	126.7	15.4	274.6	6.000	76.2	83.1	39.8
107.0	0.317	126.6	15.4	274.4	6.000	76.6	83.2	39.8
108.0	0.317	126.1	15.4	274.2	6.000	77.0	83.3	39.8
109.0	0.317	125.2	15.3	274.0	6.000	77.5	83.4	39.8
110.0	0.317	124.3	15.3	273.9	6.000	77.7	83.5	39.8
111.0	0.317	123.6	15.2	273.7	6.000	78.2	83.6	39.8
112.0	0.317	123.0	15.2	273.5	6.000	78.6	83.8	39.8
113.0	0.317	122.7	15.2	273.4	6.000	78.8	83.9	39.7
114.0	0.317	122.5	15.1	273.2	6.000	79.1	84.0	39.7
115.0	0.317	122.3	15.1	273.0	6.000	79.3	84.1	39.7
116.0	0.317	122.1	15.1	272.9	6.000	79.4	84.2	39.7
117.0	0.317	121.9	15.1	272.7	6.000	79.4	84.3	39.6
118.0	0.317	121.6	15.1	272.6	6.000	79.4	84.4	39.6
119.0	0.317	121.3	15.1	272.4	6.000	79.4	84.6	39.6
120.0	0.317	120.8	15.0	272.3	6.000	79.5	84.7	39.5

WCKX PROTECTED/WWJM INTERFER.

EXHIBIT #4C
MINOR CHANGE APPLICATION
BLUE CHIP BROADCASTING LTD
WCKX RADIO STATION
CH 292A - 6.0 KW
LONDON, OHIO
November 1997

GRAHAM BROCK, INC.

BROADCAST TECHNICAL CONSULTANTS

WWJM - BLH-930601KD
Channel= 292
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Interfering
40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
256.0	6.000	78.6	25.3	103.1	0.317	124.4	75.1	31.7
257.0	6.000	78.3	25.2	102.7	0.317	124.0	74.9	31.7
258.0	6.000	77.4	25.1	102.4	0.317	123.7	74.9	31.8
259.0	6.000	77.2	25.1	102.1	0.317	123.4	74.7	31.8
260.0	6.000	77.7	25.1	101.8	0.317	123.1	74.5	31.8
261.0	6.000	79.0	25.3	101.5	0.317	122.9	74.1	31.9
262.0	6.000	80.2	25.5	101.3	0.317	122.7	73.8	32.0
263.0	6.000	81.2	25.7	101.0	0.317	122.4	73.5	32.1
264.0	6.000	81.9	25.8	100.7	0.317	122.2	73.3	32.2
265.0	6.000	81.7	25.7	100.3	0.317	121.9	73.2	32.2
266.0	6.000	81.1	25.6	100.0	0.317	121.7	73.2	32.2
267.0	6.000	80.4	25.5	99.6	0.317	121.5	73.2	32.2
268.0	6.000	80.0	25.5	99.2	0.317	121.2	73.1	32.2
269.0	6.000	79.6	25.4	98.9	0.317	121.0	73.1	32.2
270.0	6.000	79.5	25.4	98.5	0.317	120.7	73.0	32.2
271.0	6.000	79.5	25.4	98.2	0.317	120.6	73.0	32.2
272.0	6.000	79.5	25.4	97.9	0.317	120.4	72.9	32.2
273.0	6.000	79.3	25.4	97.5	0.317	120.2	72.9	32.2
274.0	6.000	77.5	25.1	97.2	0.317	120.1	73.1	32.1
275.0	6.000	75.4	24.8	96.8	0.317	119.9	73.4	32.0
276.0	6.000	73.4	24.5	96.5	0.317	119.7	73.7	31.9
277.0	6.000	71.9	24.3	96.1	0.317	119.4	73.9	31.8
278.0	6.000	71.4	24.2	95.8	0.317	119.3	74.0	31.8
279.0	6.000	71.4	24.2	95.5	0.317	119.1	74.0	31.8
280.0	6.000	71.2	24.2	95.2	0.317	118.9	74.1	31.7
281.0	6.000	70.1	24.0	94.8	0.317	118.7	74.3	31.7
282.0	6.000	68.8	23.8	94.5	0.317	118.6	74.6	31.6
283.0	6.000	67.6	23.6	94.3	0.317	118.5	74.8	31.5
284.0	6.000	66.8	23.5	94.0	0.317	118.4	75.0	31.5
285.0	6.000	66.2	23.4	93.7	0.317	118.2	75.1	31.4
286.0	6.000	66.4	23.4	93.4	0.317	118.0	75.2	31.4
287.0	6.000	67.1	23.5	93.0	0.317	117.8	75.2	31.4
288.0	6.000	67.9	23.7	92.7	0.317	117.7	75.2	31.4
289.0	6.000	68.9	23.8	92.4	0.317	117.5	75.1	31.4
290.0	6.000	69.7	23.9	92.0	0.317	117.4	75.1	31.4
291.0	6.000	70.3	24.0	91.7	0.317	117.2	75.2	31.3
292.0	6.000	70.9	24.1	91.4	0.317	117.1	75.2	31.3
293.0	6.000	71.9	24.3	91.0	0.317	116.9	75.2	31.3
294.0	6.000	73.2	24.5	90.7	0.317	116.8	75.2	31.3
295.0	6.000	74.8	24.7	90.3	0.317	116.6	75.2	31.3
296.0	6.000	76.2	24.9	90.0	0.317	116.5	75.2	31.3

WCKX INTERFER./WWJM PROTECTED

EXHIBIT #4D
MINOR CHANGE APPLICATION
BLUE CHIP BROADCASTING LTD
WCKX RADIO STATION
CH 292A - 6.0 KW
LONDON, OHIO
November 1997

GRAHAM BROCK, INC.

BROADCAST TECHNICAL CONSULTANTS

Predicted Signal Contours:

39 52 29 - TABULATED PROTECTED AND INTERFERING CONTOURS
83 18 19 - WCKX RADIO STATION - LONDON, OHIO

ERP = 6 kW, 7.782 dBk FM - 2-6 Tables						
Radial	HAAT	kW	dBk	Field	60 dBu.5	40 dBu.1
0 Degr.	108.0M	5.762	7.606	0.980	29.1	87.4
10 Degr.	108.9M	5.078	7.057	0.920	28.3	85.5
20 Degr.	110.6M	4.034	6.058	0.820	27.1	82.3
30 Degr.	107.8M	3.025	4.807	0.710	25.1	77.4
40 Degr.	109.2M	2.018	3.050	0.580	23.1	71.7
50 Degr.	111.0M	1.297	1.131	0.465	21.0	65.7
60 Degr.	111.1M	0.866	-0.623	0.380	19.0	60.4
70 Degr.	111.1M	0.614	-2.115	0.320	17.3	56.4
80 Degr.	112.3M	0.406	-3.919	0.260	15.5	51.9
90 Degr.	116.5M	0.317	-4.984	0.230	14.8	49.8
100 Degr.	121.7M	0.317	-4.984	0.230	15.1	50.6
110 Degr.	124.3M	0.317	-4.984	0.230	15.3	51.0
120 Degr.	120.8M	0.317	-4.984	0.230	15.0	50.5
130 Degr.	115.3M	0.317	-4.984	0.230	14.7	49.7
140 Degr.	108.5M	0.406	-3.919	0.260	15.2	51.3
150 Degr.	107.0M	0.614	-2.115	0.320	16.9	55.7
160 Degr.	107.2M	0.866	-0.623	0.380	18.6	59.8
170 Degr.	105.1M	1.297	1.131	0.465	20.4	64.6
180 Degr.	107.0M	2.018	3.050	0.580	22.8	71.3
190 Degr.	107.1M	3.025	4.807	0.710	25.1	77.3
200 Degr.	102.7M	4.034	6.058	0.820	26.2	80.9
210 Degr.	95.3M	5.078	7.057	0.920	26.6	83.2
220 Degr.	88.0M	5.530	7.427	0.960	26.2	83.3
230 Degr.	83.9M	6.000	7.782	1.000	26.0	83.8
240 Degr.	80.6M	6.000	7.782	1.000	25.6	83.2
250 Degr.	77.3M	6.000	7.782	1.000	25.1	82.6
260 Degr.	75.6M	6.000	7.782	1.000	24.8	82.3
270 Degr.	75.1M	6.000	7.782	1.000	24.7	82.2
280 Degr.	75.4M	6.000	7.782	1.000	24.8	82.2
290 Degr.	78.0M	6.000	7.782	1.000	25.2	82.7
300 Degr.	81.7M	6.000	7.782	1.000	25.7	83.4
310 Degr.	84.4M	6.000	7.782	1.000	26.1	83.9
320 Degr.	87.3M	6.000	7.782	1.000	26.5	84.5
330 Degr.	92.5M	6.000	7.782	1.000	27.3	85.4
340 Degr.	101.2M	6.000	7.782	1.000	28.5	86.9
350 Degr.	106.6M	6.000	7.782	1.000	29.2	87.8

Ave. HAAT= 100.4M, Ant. COR= 385.4M AMSL						
Other Azimuths:						
45 Degr.	110.4M	1.638	2.143	0.522	22.1	68.9
135 Degr.	111.8M	0.360	-4.435	0.245	14.9	50.5
225 Degr.	85.9M	5.762	7.606	0.980	26.1	83.6
315 Degr.	85.5M	6.000	7.782	1.000	26.3	84.1

TABULATED CONTOUR DATA

EXHIBIT #4E
MINOR CHANGE APPLICATION
BLUE CHIP BROADCASTING LTD
WCKX RADIO STATION
CH 292A - 6.0 KW
LONDON, OHIO
November 1997

GRAHAM BROCK, INC.

BROADCAST TECHNICAL CONSULTANTS

MINOR CHANGE APPLICATION
BLUE CHIP BROADCASTING, LTD
WCKX RADIO STATION
CH 292A - 106.3 MHZ - 6.0 KW
LONDON, OHIO
November 1997

EXHIBIT #5

Facilities Within Study

There are no proposed or authorized FM or television transmitters, or any non-broadcast radio stations, within 60 meters of this proposal. There are no known established commercial or government receiving stations or cable head-end facilities within the blanketing contour of WCKX. However, within the blanketing contour there are some sparsely populated areas. See Exhibit #5A for a detailed FM blanketing study and statement.

There are no authorized or proposed FM or TV transmitters within 10.0 kilometers of this proposal. There are no AM stations within 3.2 kilometers (2.0 miles) of this proposal.

MINOR CHANGE APPLICATION
BLUE CHIP BROADCASTING, LTD
WCKX RADIO STATION
CH 292A - 106.3 MHZ - 6.0 KW
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EXHIBIT #5A

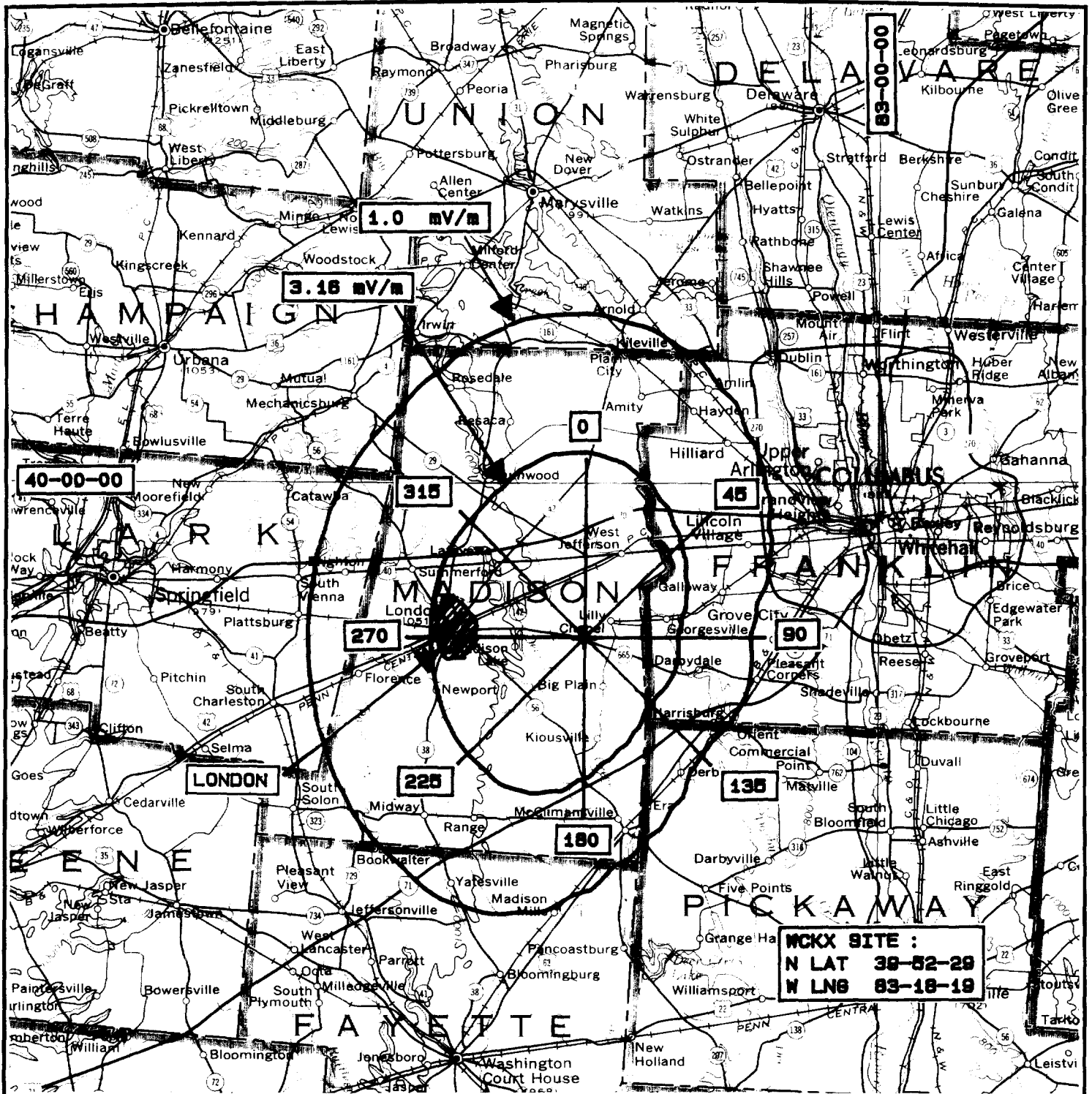
FM BLANKETING CONTOUR CALCULATION

The blanketing contour of WCKX is determined using the following formula as defined in §73.318 of the Commission's Rules:

$$D = 0.394 * \text{SQR}(P)$$

where D= distance to blanketing contour in kilometers.
P= power (in kilowatts) of the proposed station.

The effective radiated power of WCKX is 6.0 kilowatts which yields a blanketing contour extending 0.97 kilometers from the tower. While it is the experience of this firm that very little, if any, blanketing interference will be experienced by the grant and subsequent operation of this proposal, Blue Chip Broadcasting, Ltd., will follow the guidelines of §73.318 and use sound engineering practices to remedy any blanketing complaints to the Commission's satisfaction.



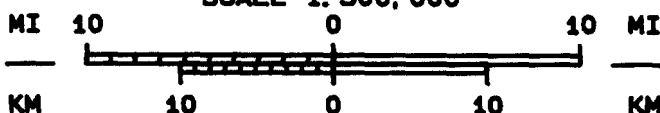
PREDICTED SERVICE CONTOURS

MAP IS A PORTION OF THE 1: 500, 000 SCALE
U.S.G.S. BASE MAP OF OHIO.

EXHIBIT #7

MINOR CHANGE APPLICATION
BLUE CHIP BROADCASTING LTD
WCKX RADIO STATION
CH 292A - 6.0 KW
LONDON, OHIO
November 1997

SCALE 1: 500, 000



GRAHAM BROCK, INC.

BROADCAST TECHNICAL CONSULTANTS

MINOR CHANGE APPLICATION
BLUE CHIP BROADCASTING, LTD
WCKX RADIO STATION
CH 292A - 106.3 MHZ - 6.0 KW
LONDON, OHIO
November 1997

EXHIBIT # 8

Radio Frequency and Environmental Assessment

A study has been made to determine whether this proposal is in compliance with 47 C.F.R. §1.1307 of the Commission's rules and with OET Bulletin #65, dated August 1997 ("Bulletin"), regarding human exposure to radio frequency radiation in the vicinity of broadcast towers. This study considers all nearby stations and utilizes the appropriate formulas contained in the Bulletin.

Environmental Analysis

The proposed new FM tower does not involve the use of high intensity white lighting (strokes) in a residential neighborhood. The structure is not located in an officially designated wilderness area or wildlife preserve, nor does it threaten the existence or habitat of endangered species. The facility does not affect districts, sites, buildings, structures or objects significant in American history, architecture, archaeology, engineering or culture that are listed in the National Register of Historic Places, or are eligible for listing, nor does it affect Indian religious sites. Further, the site is not located in a floodplain and will not, to the knowledge of the licensee, require significant change in surface features (wetland fill, deforestation or water diversion) at the time of construction.

Radio Frequency Radiation Study

This radio frequency radiation study is being conducted to determine whether this proposal is in compliance with OET Bulletin Number 65, dated August 1997, regarding human

exposure to radio frequency radiation in the vicinity of broadcast towers. This study considers all nearby contributing stations and utilizes the appropriate formulas contained in the OET Bulletin.

The proposed WCKX three bay antenna system will be mounted with its center of radiation 85.17 meters (279.4 feet) above the ground at the proposed tower location and operate with an effective radiated power of 6.0 kilowatts in the horizontal and vertical plane (circularly polarized). At two meters, the height of an average person, above the ground at the base of the proposed tower, the proposed antenna system will contribute, worst case, 0.0580 mw. Based on exposure limitations for a controlled environment, 5.8% of the allowable ANSI limit is reached at two meters above the ground at the base of the proposed tower. For uncontrolled environments, 29.0% of the ANSI limit is reached at two meters above the ground at the base of the tower.

Since this level for uncontrolled environments is well below the 100% limit defined by the Commission, the proposed WCKX facility is believed to be in compliance with the radio frequency radiation exposure limits as is required by the Federal Communications Commission. Further, Blue Chip Broadcasting, Ltd. ("BCB") will post warning signs in the vicinity of the tower warning of potential radio frequency radiation hazards at the site. In addition, BCB will reduce the power of the proposed facility or cease operation, in cooperation and coordination with other tower users, as necessary, to protect persons having access to the site, tower or antenna from radio frequency radiation in excess of FCC guidelines. Based on the above factors, this proposal is categorically excluded from environmental processing pursuant to §1.1306 of the Commission's rules.

AFFIDAVIT AND QUALIFICATIONS OF CONSULTANT

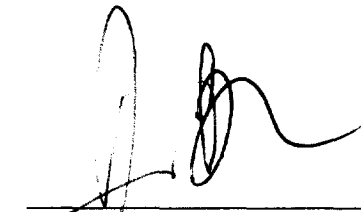
State of Georgia)
St. Simons Island) ss:
County of Glynn)

JEFFERSON G. BROCK, being duly sworn, deposes and says that he is an officer of Graham Brock, Inc. Graham Brock has been engaged by Blue Chip Broadcasting, Ltd., licensee of Radio Station WCKX, to prepare the attached Technical Exhibit.

His qualifications are a matter of record before the Federal Communications Commission. He has been active in Broadcast Engineering since 1979.


The attached report was either prepared by him or under his direction and all material and exhibits attached hereto are believed to be true and correct.

This the 24th day of November, 1997.



Jefferson G. Brock
Affiant

Sworn to and subscribed before me
this the 24th day of November, 1997



Notary Public, State of Georgia
My Commission Expires: September 12, 1999